As a preliminary matter, at page 3, paragraph 6 of the Official Action, the Examiner states that the amendments to the claims made in the Amendment filed on June 7, 2006, necessitated the new grounds of rejection presented in the latest Official Action, and therefore the application has been placed under final rejection. Applicant respectfully disagrees with the Examiner's conclusion. The revisions to the claims made in the Amendment filed on June 7, 2006 were made exclusively for the purpose of improving the form of the claims, and were not intended to make any substantive revisions to the scope of original Claims 1 and 2. For example, See, page 4, last paragraph of the Amendment filed on June 7, 2006. Applicant therefore respectfully requests that the finality of the Official Action dated August 14, 2006 be withdrawn.

In any event, Applicant respectfully submits that the two prior art references applied in the August 14, 2006 Official Action do not teach or suggest the invention defined by Claims 1 and 2. At page 2, paragraphs 3 and 4 of the Official Action, Claims 1 and 2 have been rejected under 35 U.S.C. Section 102(b) as being anticipated by the newly applied Roberts et al (U.S. Patent No. 6,109,620), and have also been rejected as being anticipated by the newly applied Gustafsson design patent (U.S. Des. 266,521).

It was initially noted that the Roberts et al patent was cited in the International Search Report issued in connection

with the corresponding PCT international patent application. The Roberts et al patent was also discussed in the Information Disclosure Statement filed with the original application papers for the present patent application on February 25, 2005. Roberts et al was cited in the International Search Report in Category A, indicating that it merely defines the general state of the art, but is not considered to be of particular relevance to the PCT claims, which correspond to Claims 1 - 2 pending in the present United States patent application. Moreover, the International Preliminary Report On Patentability issued in connection with the corresponding PCT application, concludes that the claims of the PCT application, which correspond to the claims pending in the present United States application, are considered to be patentable over the Roberts et al patent. A copy of the International Preliminary Report On Patentability was also enclosed with the original application papers filed for this patent application on February 25, 2005.

Independent Claim 1 is directed to an impact adapter for transfer of impacts and rotation from an impact rock drilling machine to a drill string. It expressly recites that grooves at an end of a second section of the impact adapter directed away from the first end section of the impact adapter "increase in width in a direction away from the first end section" [emphasis added]. In the Official Action, the Examiner states that Roberts et al discloses this feature of the invention referring to Figure 2 of the Roberts et al drawings. Figure 2 of the drawings is a

cross section of splined area 10, showing a single position on element 10. There is clearly no disclosure whatsoever in the Roberts et al patent that the grooves on splined area 10 (which is considered to be a second end section of the impact adapter) increase in width in a direction away from the first end section (the threaded end section 16 of Roberts et al shown in Figure 1 of the drawing). On the contrary, the grooves defined on the splined area 10 of Roberts et al appear to be of a constant width, and therefore clearly do not increase in width in a direction away from the threaded section 16 of the adapter illustrated by Figure 1 of the drawing of Roberts et al.

Dependent Claim 2 expressly recites that ridges at the end of the second section of the impact adapter directed away from the first end section of the impact adapter "decrease in radial extension in a direction away from the first end section" [emphasis added]. The Examiner also relies upon Figure 2 of the Roberts et al drawing to reject dependent Claim 1. However, as noted above, Figure 2 is a cross section of the splined area 10 illustrated by Figure 1 of the Roberts et al drawing, and thus illustrates only a single cross sectional position of the splined area 10. As such, Figure 2 clearly does not disclose that the ridges 13 decrease in radial extension along the splined area 10 (Figure 1 of Roberts et al) in a direction away from the threaded end 16 (as illustrated by Figure 1 of Roberts et al). On the contrary, Figures 1 and 2 of the drawings of Roberts et al appear to illustrate that the radial extensions of ridges 13 are

constant along the splined area 10, and clearly do not decrease in radial extension in a direction away from the first end section (the threaded area 16 illustrated by Figure 1 of Roberts et al).

Referring now to the Gustafsson design patent, Figure 1 of the drawing illustrates a shank adapter for a rock drilling machine having a first end defining a threaded section, and a second end defining grooves and ridges. Figure 2 illustrates a top plan view of Figure 1, and Figure 3 illustrates a bottom plan view of Figure 1. It is clear from Figure 1 itself, and from comparing Figs. 2 and 3 to each other, that the width of the grooves on the second end section of the adapter are constant throughout the second end section, and therefore do not increase in width in a direction away from the first (threaded) end section, as expressly recited in independent Claim 1. Moreover, it is clear that the radial extension of the ridges on the second section of the impact adapter are constant throughout the length of the second end section, as can readily be determined by comparing Figures 2 and 3. Accordingly, there is no teaching or suggestion that the radial extension of the ridges of Gustafsson decrease in a direction away from the first (threaded) end of the illustrated impact adapter, as expressly recited in dependent Claim 2.

Enclosed for the Examiner's convenience are schematic sketches illustrating the features of the impact adapter defined

by pending Claims 1 and 2. As the width of the grooves 8 of the spline 6 of the impact adapter illustrated by Figures 1 - 3 of the drawing increase in an axial direction away from threaded end 5 of the impact adapter, the radial extension of the ridges 7 of the spline 6 decrease in an axial direction away from the threaded end 5 of the impact adapter as illustrated by Figures 1 - 3 of the drawing.

It is well established that a rejection of a claim as being anticipated by a prior art reference requires the Patent & Trademark Office to establish a strict identity of invention between each applied reference and each rejected claim. Stated in other words, a rejection of a claim as being anticipated is improper unless a single applied prior art reference teaches all features of the claim as arranged in the claim. See, for example, Connell v. Sears Roebuck & Co., 220 USPQ 193 (Fed. Cir. 1983).

In the instant case, independent Claim 1 defines an impact adapter in which grooves at an end of a second end section directed away from a first end section "increase in width in a direction away from the first end section". Dependent Claim 2 recites an impact adapter in which ridges at the end of the second end section directed away from the first end section "decrease in radial extension in a direction away from the first end section". Both the Roberts et al patent and the Gustafsson design patent disclose impact adapters having grooves of constant

width, and ridges of constant radial extension, disposed at the second end of the adapter. Clearly, neither of these two references teach (or suggest) that the width of the grooves increase in a direction (axially) away from the first (threaded) end of the adapter, or that the ridges of the second end of the adapter decrease in radial extension in a direction (axially) away from the first (threaded) end of the adapter, as expressly and positively recited in Claims 1 and 2.

Moreover, neither of the two applied references teach or suggest the functional advantages of the impact adapter resulting from the structure recited in Claims 1 and 2. These functional advantages include reducing the breakage of ridges adjacent the rear end of the impact adapter by decreasing the surface pressure between the impact adapter and the driver (See Applicant's Specification, page 1).

Applicant respectfully submits that Claims 1 and 2 define impact adapters which are not taught or suggested by either of the two references applied in the latest Official Action, and that Claims 1 - 2 are in proper form for allowance.

* * *

Accordingly, Applicant respectfully requests that the prior art rejections raised in the latest Official Action be

reconsidered and withdrawn, and that this patent application be allowed.

Respectfully submitted,

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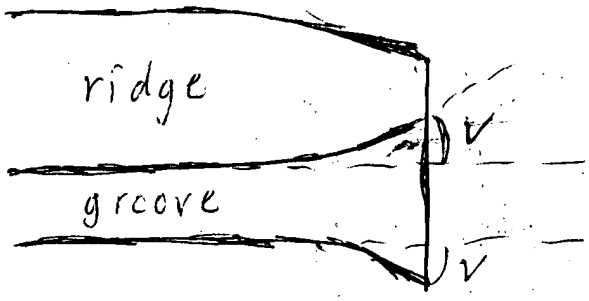
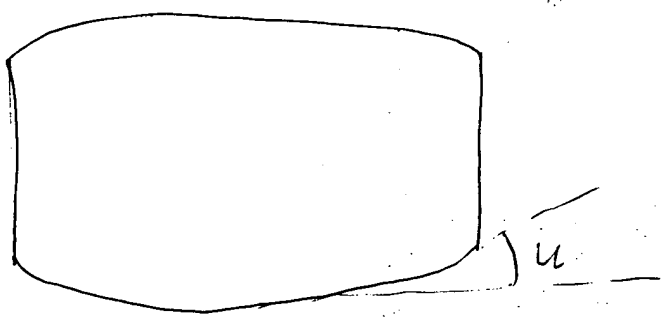


Claim 1



Claim 2